

XL.—*On some African Bats and Rodents.*  
By OLDFIELD THOMAS.

*Kerivoula muscilla*, sp. n.

Size very small. Ears short, laid forward in the spirit-specimen they barely reach to the tip of the muzzle; their breadth equal to their length; inner margin strongly convex, outer with a well-marked emargination above, convex below. Tragus as in Dobson's second group, a small basal lobule present, very much as in *K. Smithii*; inner margin evenly convex, outer slightly concave. Limbs short, less strikingly delicate than usual; upper surface of forearms and proximal part of the digits and of hind limbs and feet clothed with fine golden-brown hairs. Wings to the base of the toes. Posterior edge of interfemoral with a fringe of short curved hairs growing from its under surface. Prepuce tufted with long hairs.

Fur long, brownish grey above and below, so far as can be made out on a spirit-specimen.

Inner upper incisors slender, practically unicuspid, a rudiment of a secondary cusp present about halfway up the hinder aspect; outer incisors long, nearly as long as the inner ones, each with a minute external basal secondary cusp. Two small upper and three lower premolars subequal *inter se*.

Dimensions of the type (measured on the spirit-specimen):—  
Forearm 27 mm.

Head and body 37; tail 33; head 14; ear 10; tragus on inner edge 6; third finger, metacarpus 26.5, first phalanx 13.5, second phalanx 15; lower leg and hind foot (c. u.) 17.5; calcar 16.

*Hab.* Ja River, Southern Cameroons.

*Type.* Adult male. Collected 22nd December, 1905, by Mr. G. L. Bates. One specimen.

This little *Kerivoula* is readily distinguishable from any African species hitherto described by its small size, the presence of an interfemoral fringe, and its long outer incisors. Dobson's *K. africana* agrees with it in some respects, but is said to have a tragus as in *K. Hardwickei* and ears "longer than the head" \*.

\* By this expression Dobson appears always to have meant that the ears when laid forward extended beyond the tip of the muzzle.

*The Giant Squirrels of Western Africa.*

The following is a rough key to the different forms of African giant squirrel:—

- A. Fore limbs red above, as well as hind. Skull with very long muzzle, narrow slit-like anteorbital foramina, and small bullæ.
- a. Crown red. (Gold Coast.) . . . . . *Funisciurus Ebi*, Temm.  
 b. Crown grey, like fore-back. (Gaboon and French Congo.) . . . . . *F. Wilsoni*, Du Ch.
- B. Fore limbs not red above. Skull with short muzzle, large rounded anteorbital foramina, and large bullæ.
- a. General colour above yellow or straw-colour; hind feet yellow.
- a<sup>2</sup>. Crown hoary grey. (Fernando Po and Gaboon.) . . . . . *Sciurus Stangeri*, Waterh.  
 (Syn. *S. Nordhoffi*, Du Ch.)
- b<sup>2</sup>. Crown yellow, like back. (N. Angola.) *S. S. loandæ*, subsp. n.
- b. General colour usually blackish, speckled with yellow or fulvous; hind feet red.
- a<sup>2</sup>. Sides of neck below ears white; a white line edging the belly.
- a<sup>3</sup>. Ticking of dorsal hairs fulvous. Inner side of forearms whitish. (Gold Coast.) . . . . . *S. S. Temminckii*, Aud.
- b<sup>3</sup>. Ticking of dorsal hairs yellowish. Inner side of forearms rufous. (Lower Niger.) . . . . . *S. S. nigeriæ*, subsp. n.
- b<sup>2</sup>. Sides of neck below ears greyish brown; line along sides of belly hoary grey.
- a<sup>3</sup>. Size larger; yellowish suffusion of back not extending on to crown. (Cameroons, Gaboon, and French Congo.) . . . . . *S. S. eborivorus*, Du Ch.  
 (Syn. *S. calliurus*, Pet.)
- b<sup>3</sup>. Size smaller; yellowish suffusion of back extending on to crown. (Uganda.) . . . . . *S. S. centricola*, subsp. n.

I can find no reason to distinguish Du Chailu's *S. Nordhoffi* (type B.M. no. 67. 9. 5. 1) from the insular *S. Stangeri*, though the form occurring further south in Angola seems separable. But with regard to Peters's *S. calliurus*, it is to be noted that two specimens from the Como River differ from the series from the Benito by the larger size of their anteorbital foramina, which may indicate that the more northern of the two should be separated from the southern; Peters's name would then apparently apply to the former.

With regard to the placing of all these six true *Sciuri* as geographical forms or subspecies of one species, the links

between one and another seem to be so complete that I have failed to recognize any division of more than subspecific rank. At first it appeared that at least the dark forms with red feet (*eborivorus*) might be separated specifically from the straw-coloured ones with yellow feet (*Stangeri*), but the animal I have named *nigeriæ* is really practically as yellow as *Stangeri*, while it has the red feet of *eborivorus* and the white neck-patches of *Temminckii*. Again, an Eastern Congo specimen has a yellow *Stangeri* back with red *eborivorus* feet, but is without white neck-patches. As to distribution, there is as yet no evidence that both *Stangeri* and *eborivorus* forms occur in any one district, though the ranges of the two types largely overlap.

The recognition of *Wilsoni* as a *Funisciurus* and of *Stangeri* as a true *Sciurus* is due to Mr. de Winton, who wrote some notes on the group in 1898\*.

The following are descriptions of the new subspecies:—

*Sciurus Stangeri loandæ.*

Size and general characters quite as in true *Stangeri*, though the yellow of the hinder back is rather more vivid. Head, instead of turning hoary grey on the crown, simply becoming paler and more whitish yellow than the back; a dull yellowish patch behind each ear, and the ears themselves yellow rather than brown. Cheeks whitish or greyish white. Line edging body-hairs along sides of belly well-marked, white. Feet, especially the anterior, more strongly suffused with yellow above. Other characters as in true *Stangeri*.

Dimensions of the type (measured in the flesh):—

Head and body 285 mm.; tail 380; hind foot 66; ear 21.

Skull: greatest length 63; condylo-basilar length 57; length of upper tooth-series 11·5.

*Hab.* Northern Angola. Type from Canhoça.

*Type.* Adult male. B.M. no. 4. 4. 9. 42. Original number 199. Collected 12th December, 1903, by Dr. W. J. Ansorge.

This is the only form of the whole series which has not got the characteristic contrasted grey head which caused Temminck to give the preoccupied name of *caniceps* to the Gold-Coast animal.

*Sciurus Stangeri nigeriæ.*

Similar to the Gold-Coast form of this group, *S. S. Temminckii*, Anderson †, in the extension of the white throat-patch

\* Ann. & Mag. Nat. Hist. (7) ii. p. 11.

† *S. caniceps*, Temm., nec Gray.

on the sides of the neck nearly up to the lower edge of the ear and in the presence of a distinctly white line along the edges of the body-fur at the sides of the belly, but distinguished by the light speckling of the back being yellowish or, at most, fulvous instead of strong rufous and by the inner surface of the forearms being orange-rufous instead of whitish. Patch behind ear dull orange-rufous. Crown dark hoary grey. Upper surface of hands blackish, finely ticked with orange, of feet orange-rufous, becoming rich rufous terminally.

Dimensions of the type (measured in skin):—

Head and body 310 mm.; tail (doubtfully perfect) 300; hind foot 64.

Skull: greatest length 68; condylo-basilar length 56·5; length of tooth-row 10·3.

*Hab.* Abutschi, Lower Niger.

*Type.* Adult male. B.M. no. 2. 11. 10. 10. Collected by Mr. Alexander Braham.

In its yellowish general colour this animal corresponds with true *Stangeri*, while resembling members of the *eborivorus* group in its neck-patches and reddish feet.

#### *Sciurus Stangeri centricola.*

Size, as judged by skull, rather less than in true western *eborivorus*. Colours rich and bright throughout, the fulvous suffusion of the back, often confined in true *eborivorus* to the rump and never extending beyond the nape, more rufous in tone and carried forward on the head to between the eyes. Line along edge of belly not conspicuous, hoary grey. Yellowish or rufous of limbs at a maximum everywhere, the hind feet especially rich rufous.

Skull similar to that of *S. eborivorus*, but rather smaller.

Dimensions of the type (taken on the skin):—

Head and body (overstretched) 310 mm.; tail 330; hind foot 61.

Skull: greatest length 66·5; condylo-basilar length 55; length of tooth-row 11·2.

*Hab.* Entebbe, Uganda.

*Type.* Old female. B.M. no. 6. 3. 8. 24. Original number 74. Collected 7th October, 1905, by E. Degen. Six specimens, of which the first were obtained by Mr. F. J. Jackson in 1905.

#### *Funisciurus palliatus Lastii*, subsp. n.

Distinguished from other forms of *F. palliatus* by having black hands and feet.

Size and general colour as in the darker forms of *F. palliatus*, the dorsal colour closely matching that of *F. p. ornatus*, while the belly is a little darker and richer than in any of them, nearly matching the maroon-red of the tail of *F. p. ornatus*. Muzzle, forearms, inner sides of hind limbs, and end of tail-hairs all of the same rich maroon-red; but the upper surface of the hands and feet, instead of being also red, are deep glossy black without trace of red, the change at the wrists and ankles being apparently abrupt, though there are microscopic red tips to some of the hairs on the metapodials.

Skull and dentition as usual, except that the top of the muzzle is flatter, less bowed downwards, and the molars appear to be rather narrower than in the mainland subspecies.

Dimensions of the type:—

Hind foot, s. u., (c.) 49 mm.

Skull: greatest length 51; length of molar series exclusive of  $p^3$  8.8.

*Hab.* Zanzibar Island.

*Type.* Adult male. B.M. no. 6. 6. 5. 21. Collected and presented by J. T. Last, Esq.

This squirrel is so abruptly different from any of the forms of *F. palliatus* by its black instead of red hands and feet that many naturalists would think a binomial should be used for it; but it is so essentially a member of the *palliatus* group that I prefer to regard it as a subspecies, especially as faint indications of red may be found on its feet and also slight traces of black on those of *F. p. suahelicus*, its nearest relative.

In Mr. Oscar Neumann's account\* of the subspecies of *F. palliatus* he records *F. p. suahelicus* from Zanzibar; but if his specimens were really obtained in the island he must have overlooked the very material difference in the coloration of the feet.

#### *Mus Brockmani*, sp. n.

A medium-sized pale grey species, with a very long pencilled tail.

Size and general proportions very much as in *M. Verreauxi* of the Cape. Fur of medium length; the ordinary hairs of the back about 9 mm. in length, the isolated longer hairs 12 mm. General colour above pale buffy grey, paler than Ridgway's "drab-grey," the light rings to the hairs

\* SB. Ges. nat. Fr. Berl. 1902, p. 178.

cream-buff. Sides lighter. Belly white, with a slight creamy tinge, the hairs along its sides slaty at base, those on the throat, chest, and middle area of belly white to the roots. Ears almost naked, their substance greyish brown. Upper surface of hands and feet pure white; fifth hind toe without claw reaching to the end of the basal phalanx of the fourth. Tail very long, finely scaled (15-16 rings to the cm.), thinly haired basally, the hairs lengthening on the terminal half of the tail to form a distinct pencil, of which the individual hairs are about  $2\frac{1}{2}$  mm. long; in colour the tail is sharply bicolor, brown above and white beneath for its whole length.

Skull, as compared with other African medium-sized species, characterized by a rather flatter brain-case than usual, the parietals being less markedly convex; supra-orbital edges rounded anteriorly, square, not ridged, posteriorly. Palatal foramina widely open, their posterior end not narrowed. Mastoid portion of bulla, as usual in this group, well defined from the sides of the supraoccipital, with a fair-sized vacuity at its upper end.

Teeth as in the allied species, the antero-internal cusp of  $m^2$  large and well defined, the antero-external minute.  $M^3$  with the usual tricuspid interior edge.

Dimensions in the flesh:—

Head and body 108 mm.; tail 161; hind foot 22; ear 18.

Skull: greatest length 29.5; basilar length 23; zygomatic breadth 14; interorbital breadth 4.2; height of brain-case from basilar suture 7.6; palatilar length 12.6; diastema 7.6; palatal foramina  $6.2 \times 2.2$ ; length of upper molar series 4.5.

*Hab.* Upper Sheikh, British Somaliland. Alt. 4500'.

*Type.* Adult male. B.M. no. 6.3.4.8. Collected 23rd November, 1905. Presented by Dr. R. E. Drake-Brockman.

This mouse is readily distinguishable from all other members of the genus by its pale colour above, whiter belly, and long feathered bicolor tail.

Of other hairy tailed species which may have a relationship to it, *M. Verreauxi* and *M. albipes* have grey bellies, besides being darker above, while *M. auricomis*, which has a white belly, has its general body-colour fulvous.

Dr. Drake-Brockman has contributed a considerable number of interesting Somali animals to the National Collection, and I have much pleasure in connecting his name with this very pretty little species.